AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method of producing a reference image, comprising:

forming plural images by a CCD camera by imaging a plurality of glass bottles as samples, wherein said samples which may contain defective glass bottles by a CCD camera; and

producing a reference image from the obtained plural images, a range of brightness when light is applied to a non-defective glass bottle being specified in said reference image.

Claim 2 (currently amended): A method of producing a reference image according to claim 1, wherein said range of brightness specified in said reference image is determined by detectinggrasping brightness in each pixel in the images of plural non-defective glass bottles, and determining the maximum brightness and the minimum brightness in each pixel, whereinand said range of brightness is between the maximum brightness and the minimum brightness.

Claim 3 (currently amended): A method of producing a reference image according to claim 1 or 2, wherein plural images are formed by imaging a glass bottle as one sample simultaneously by a plurality of CCD cameras from a plurality of imaging angles, whereinand said reference image is produced forin each predetermined angle.

Claim 4 (currently amended): A method of producing a reference image according to any one of claims 1 through 3claim 1, wherein before producing said reference image, images of defective glass bottles are removed from said plural images imaged by said CCD cameras, and only the images of non-defective glass bottles are obtained.

Claim 5 (currently amended): A method of producing a reference image according to claim 4, wherein a frequency distribution of brightness of pixels located at the same pixel position inof

said plural images is obtained, an average value and standard deviation of brightness of said pixels are calculated, and when there is at least one pixel having brightness higher than said average value by a predetermined multiple of said standard deviation or more, an image having said at least one pixel is judged to be an image of a defective glass bottle and then removed.

Claim 6 (currently amended): A method of producing a reference image according to claim 4, wherein a frequency distribution of brightness of pixels located at the same pixel position inof said plural images is obtained, an average value and standard deviation of brightness of said pixels are calculated, and when there is at least one pixel having brightness lower than or equal to a value calculated by subtracting a predetermined multiple of said standard deviation from said average value, an image having said at least one pixel is judged to be an image of a defective glass bottle and then removed.

Claim 7 (currently amended): A method of inspecting a glass bottle, wherein a defect at a specific part of a glass bottle is detected by comparing the reference image obtained by the method according to any one of claims 1 through 6claim 1, with an image which is formed by imaging with a CCD camera the glass bottle to be inspected by a CCD camera.

. Claim 8 (original): An apparatus for producing a reference image, comprising:

a CCD camera for forming plural images by imaging a plurality of glass bottles as samples which may contain defective glass bottles; and

an image processor for producing a reference image from the obtained plural images, a range of brightness when light is applied to a non-defective glass bottle being specified in said reference image.

Claim 9 (currently amended): An apparatus for producing a reference image according to claim 8, wherein said range of brightness specified in said reference image is determined by detectinggrasping brightness in each pixel in the images of plural non-defective glass bottles, and determining the maximum brightness and the minimum brightness in each pixel, and wherein said

range of brightness is between the maximum brightness and the minimum brightness.

Claim 10 (currently amended): An apparatus for producing a reference image according to claim 8 or 9, wherein plural images are formed by imaging a glass bottle as one sample simultaneously by a plurality of CCD cameras from a plurality of imaging angles, whereinand said reference image is produced atin each predetermined angle.

Claim 11 (currently amended): An inspecting apparatus for detecting a defect of a glass bottle by imaging light from the glass bottle while the glass bottle is illuminated, and processing the obtained image, the inspecting apparatus comprising:

a lighting device disposed at a predetermined position with respect to the glass bottle;

a plurality of CCD cameras disposed around the glass bottle for imaging a specific part of the glass bottle; and

an image processor for processing the images obtained by said CCD cameras;

wherein said image processor detects a defect at a specific part of the glass bottle by comparing the reference image obtained by said apparatus according to any one of claims 8 through 10claim 8, with an image formed by imaging the glass bottle to be inspected by said CCD camera.